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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/737,889 | 12/15/2000 | J. David Carlson | IR-2702(EV) | 1991 |

193 7590 02/17/2005

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111 LORD DRIVE
CARY, NC 27512

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| EXAMINER |
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SY, MARIANO ONG

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| ART UNIT | PAPER NUMBER |
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3683

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/737,889

Applicant(s)

CARLSON, J. DAVID

Examiner

Mariano Sy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 3, 11-14 and 20 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-9, 17 and 19 is/are rejected.
- 7) ☒ Claim(s) 10 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09122002, 05202004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election of Specie A, Figures 1-5, Claims 1, 2, 4-10, and 15-19 in the reply filed on May 20, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: a bearing member "405", page 11, line 9. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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4. The drawings are objected to because in pursuant to 37 CFR 1.83(a) claim 1, line 7 and claim 19, line 6 recite "at least one magnetic field generator" which is not shown in the drawing. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 2, 4, 9, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kashima et al. (JP 4-331840).

Re-claim 1 Kashima et al. disclosed, as shown in the figure 1, a damper comprising: a housing 3 including a cavity formed therein; a first member 11 disposed in said cavity and movable in said cavity; a second member 2 disposed in said cavity; an intermediate member 12,13 between the first and second members, the first member being in frictional engagement with the intermediate member; at least one magnetic field generator 1 mounted to magnetically couple the first and second members thereby maintaining the first member in frictional engagement with the intermediate member and wherein the first member is movable against the intermediate member to generate a damping force.

Re-claims 2, 4, and 17 wherein the second member is movable, and the second member follows the movement of the first member when there is movement on the vibration damper as a unit.

Re-claim 9 wherein the housing is comprised of a tubular member having a wall defining an inner housing surface with means 6,7 for supporting the intermediate member provided along the inner housing surface, the housing further comprising first 4 and second 5 end cap members.

Re-claim 19 Kashima et al. disclosed, as shown in the figure 1, a damper comprising: a first member 11; a second member 2; an intermediate member 12,13 between the first and second members, the first member being in frictional engagement with the intermediate member; at least one magnetic field generator 1 mounted to

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magnetically couple the first and second members thereby maintaining the first member in frictional engagement with the intermediate member and wherein the first member is movable against the intermediate member to generate a damping force; and means 6,7 for preventing displacement of the intermediate member.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashima et al. in view of Cunningham (US 4,517,505).

Re-claims 5-8 Kashima et al. disclosed wherein the first member comprises a first seat 8, the at least one magnetic field generator being supported in the first seat; wherein the second member comprises a second seat 9, the at least one magnetic field generator being supported in the second seat.

However Kashima et al. failed to disclose a keeper to maintain the at least one magnetic field generator of the first and second members and said at least one magnetic field generator of the first and second members are comprised of a plurality of magnets.

Cunningham teaches the use of a variable force magnetic damper that utilizes permanent magnets 20 (see fig. 2) wherein electromagnets can also be used.

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It would have been obvious to one of ordinary skill in the art to modify the damper of Kashima et al. utilizing a plurality of permanent magnets with keepers instead of electromagnets, in view of the teaching of Cunningham, is a matter of design choice as an alternate equivalent with the same intended function of vibration isolation depending upon type of application and cost.

9. Claims 10 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 15 and 16 are allowed.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

| | |
|------------------|----------------|
| Thorn | (US 4,957,279) |
| Corcoran et al. | (US 5,257,680) |
| Carlson et al. | (US 5,277,281) |
| Carlson et al. | (US 5,284,330) |
| Agnihotri et al. | (US 5,984,056) |
| Carlson | (US 6,378,671) |
| Carlson | (US 6,427,813) |
| Kashima | (JP 4-341625) |

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Hitachi (JP 2003-144792)

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariano Sy whose telephone number is 703-308-3427.

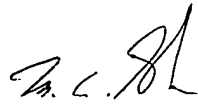
The examiner can normally be reached on Mon.-Fri. from 9:00 A.M. to 3:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 M. Sy

January 25, 2005


2/10/2005
MATTHEW C. GRAHAM
PRIMARY EXAMINER
GROUP 310